

Taking a User-Centered Approach to Model Output Development

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Goal: Enhanced Decision Support

- Enhanced decision support is an intended outcome and impact of our approach/research and evaluation efforts

Example Questions:

- What decision spaces (e.g., timelines, geography) do core partners/end-users operate within based on hazard, context, and so forth?
- What weather information gaps, if any, exist along these decision timelines? How is weather information used when making decisions leading up to extreme weather events?
- What does it mean to provide effective and responsive weather decision support?

Types of Methods Used

Qualitative

Allow for greater depth of understanding of an event, process, or individual/group experience

- One-on-one interviews
- Focus Groups
- Participant Observation
- Ethnography
- Case Studies

Quantitative

Useful for understanding social phenomena that are quantifiable and more generalizable

- Surveys/Questionnaires
- Use of secondary data (e.g., Census data) for analysis
- Quasi-experimental or Experimental methods

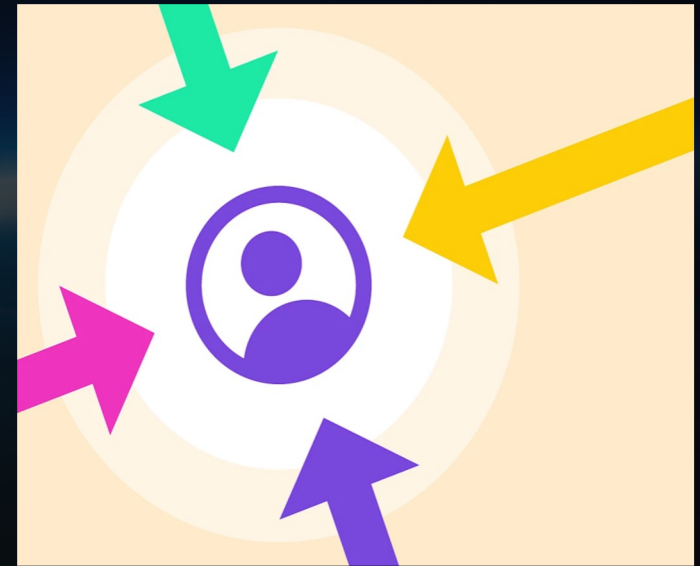
Mixed Method

Considerations for Social Science Integration

- Meaningfully integrating social science and decision support expertise early and often
 - More than “checking a box”
 - Leadership
 - Engagement and collaboration – what does this look like?
- Embracing transdisciplinary science
 - The importance of asking questions and learning from one another – fostering a culture of continuous learning
 - Engaging experts in modeling, decision support, SBS, and end-users to build a robust knowledge base
- Acknowledging timescales for research design, data collection, and analysis when conducting research with human subjects
 - Scientific Integrity & Human Subjects Protections – requirements for ethical science

Considerations for Model Output Development

- Taking a User-Centered Research Design Approach
 - Who are your end-users? Intended audiences?
 - What decision spaces do they operate within? What information needs do they have?
 - Crafting visualizations with users in mind
- Employing Evaluation Approaches and Methods
 - What are your goals and objectives?
 - How will you measure “success”? Determine whether and to what extent model outputs are meeting end-users’ needs?



Contact Information & Resources

Contact Info

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2. Cooperative Institute for Research on the Atmosphere, Colorado State University

Resources

- [WPO Social Science InSite](#)
- [WPO System for Public Access to Research Knowledge \(SPARK\)](#)
- [CONVERGE Training Modules](#)



Thank You!

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